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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

Date : 06.11.2019

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.

Name of Work : Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.

Date of Testing : 06.11.2019

Material : Sand

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	79	7.90	7.90	92.1	90-100
2.36	152	15.20	23.10	76.9	75-100
1.18	146	14.60	37.70	62.3	55-90
600 Micron	215	21.50	59.20	40.8	35-59
300 Micron	195	19.50	78.70	21.3	8-30
150 Micron	136	13.60	92.30	7.7	0-10

Note:

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Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

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TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.

Name of Work : Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.

Date of Testing : 06.11.2019

Material : Stone Dust

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	89	8.90	8.90	91.1	90-100
2.36	166	16.60	25.50	74.5	75-100
1.18	145	14.50	40.00	60.0	55-90
600 Micron	215	21.50	61.50	38.5	35-59
300 Micron	182	18.20	79.70	20.3	8-30
150 Micron	126	12.60	92.30	7.7	0-10

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

Date : 14.11.2019

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.
Name of Work : Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.

Date of Testing : 14.11.2019
Material Type : Wet Mix Macadam

Oven Dry.Wt 10500

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	389	389	3.7	96.3	95-100
22.4	2530	2919	27.8	72.2	60-80
11.2	2658	5577	53.1	46.9	40-60
4.75	1470	7047	67.1	32.9	25-40
2.36	1156	8203	78.1	21.9	15-30
0.600	826	9029	86.0	14.0	8-22
0.075	968	9997	95.2	4.8	0-8

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20 **Date:** 14.11.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.
Name of the Work	Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.
Type of Mix	Wet Mix macadam
Date of Testing	14.11.2019

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	376	380	382	22.93
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	87	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	291	293	293	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.61	22.89	23.30	

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Harsha
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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

14.11.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.
Name of Work	Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	14.11.2019

Result : Flakiness Index = **12.58%**

Elongation Index = **14.15%**

Result : Combined Flakiness & Elongation index **26.73%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

Date : 14.11.2019

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.
Name of Work : Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.
Date of Testing : 14.11.2019
Material Type : Wet Mix Macadam

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	23.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20 Date 19.11.2019

FIELD DENSITY TEST BY SAND REPLACEMENT METHOD
(IS : 2720 - Part 28)

Client : **Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.

Agency : **Sri. M. Yogesh (M/s. Professional global infrastructure privited limited),** Bangalore.

Name of work : Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division, PKG-03, BBMP, Bangalore.

Date of Testing : 18.11.2019 to 19.11.2019

Material Source : Wet Mix Macadam

Max.Dry Density g/cc	2.25
Optium Moisture Content (%)	6.28
Bulk Density of Sand g/cc(ys)	1.35 g/cc
Wt. of Sand in Cone gms	335 grams

DETERMINATION OF WET DENSITY	
Test Holes No's	1
Offset from centre of alignment & chainage	Medarahalli Village RR College Surrounding
Wt of the Moist soil from excavated hole = W	1986
Wt.of Cylinder+Sand before pouring (gm) (w1)	6800
Wt.of Sand in the cone (gm) (w2)	335
Wt.of the Cylinder and sandfilling the excavated hole (w4)	5326
Wt of the sand in the excavated hole wb=w1-w4-w2	1139
Volume of Sand in Hole = (v=wb/Ys)=cm^3	843.70
Insitu Bulk density Wet excavated soil Y=w/v	2.35
Moisture Content (%)	5.20
DETERMINATION OF DRY DENSITY	
Field dry Density (g/cc)	2.24
Field compaction achieved (%)	99.45
Required Compaction (%)	98

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Job No.: CQCE/BBMP/MY/W.No.12/2019-20

Date: 16.12.2019

TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	:	**Sri. M. Yogesh (Professional global infrastructure privited limited),** Bangalore.
Name of the work	:	Restoration of road cut portion done by BWSSB (For water line and sanitary Line) in Medarahalli village RR College surrounding area in ward no.12, Shettyhalli sub division , BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore.
Date of testing	:	16.12.2019

The results of the tests conducted on the bitumen sample using for Open Graded Premix surface

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	85	80 to 100
2	Softening point, ^{0}C	49	Min. 45
3	Ductility at 27^{0}C, cm	100 >	Min. 50
4	Flash Point, ^{0}C	296	Min. 220

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